

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

| | | | |
|---|--|--|------------------|
| Applicant's or agent's file reference PHUS030407WO | FOR FURTHER ACTION | | See item 4 below |
| International application No. PCT/IB2004/052072 | International filing date (<i>day/month/year</i>) 12 October 2004 (12.10.2004) | Priority date (<i>day/month/year</i>) 14 October 2003 (14.10.2003) | |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | | |
| Applicant KONINKLIJKE PHILIPS ELECTRONICS, N.V. | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|--|---|-----------|---------------------|--------------------------|------------|----------|--------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|-------------------------------------|-------------|--|-------------------------------------|--------------|---|
| 1. | This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a). | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | This REPORT consists of a total of 9 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead. | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | <p>This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> | <input checked="" type="checkbox"/> | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input checked="" type="checkbox"/> | Box No. VII | Certain defects in the international application | <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2). | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|--|--|
| <p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 740 14 35</p> | <p>Date of issuance of this report 18 April 2006 (18.04.2006)</p> <hr/> <p>Authorized officer Cecile Chatel</p> <hr/> <p>Telephone No. +41 22 338 70 60</p> |
|--|--|

PATENT COOPERATION TREATY

REC'D 11 APR 2005

WIPO

PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

21/4

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2004/052072

International filing date (day/month/year)
12.10.2004

Priority date (day/month/year)
14.10.2003

International Patent Classification (IPC) or both national classification and IPC
H04L12/28

Applicant
KONINKLIJKE PHILIPS ELECTRONICS, N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Telephone No. +49 89 2399-



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2004/052072

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2004/052072

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | 1-22 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-22 |
| Industrial applicability (IA) | Yes: Claims | 1-22 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Concerning point VIII (certain observations)

- 1) In **claims 1 and 13**, it is not clear from the wording of the **claims alone** what is meant by "medium sensing time histogram", since this is no generally known term and said claim lacks a precise definition of it. According to PCT Guidelines 5.31 the claims should be clear from the wording of the **claims alone**. Claims 1 and 13 do thus **not** fulfil Article 6 PCT.

For the purpose of examination, a measurement report comprising a medium sensing time histogram has been interpreted as a measurement report of the kind defined in **claim 4** or comprising the content of the entry defined in **claim 20**.

Concerning point V (reasoned statement)

- 2) The following documents from the international search report are referred to in this written opinion/examination report:

D1: XP002322534

D2: US 2001/0022558

D3: US-A-6012152

It is noted that document D1 was available from the URL:

<http://grouper.ieee.org/groups/802/11/Documents/D3T301-350.html>

which contains a statement that it was updated on August 04, 2003, i.e. before the earliest priority date of the application.

- 3) With respect to **claim 1** as the examiner understands it with reference to the clarity objection above, document **D1** (see the whole document) discloses (any references in parentheses applying to this document) a method for storing and accessing at least one medium sensing time histogram (MSTH) measurement report by a plurality of wireless network devices, comprising the steps of:
- a) obtaining at least one MSTH measurement report (see section 11.7.7.6, wherein a wireless station is obliged to respond with a MSTH measurement report upon receiving a request for such a report).

Present **claim differs** from document **D1** in that said claim additionally defines the method steps of:

- b) providing in a wireless device a table having at least one entry for storage of and access to at least one MSTH measurement report;
- c) storing the obtained at least one MSTH measurement report as said at least one entry in the provided table;
- d) identifying the source of the MSTH measurement.

In light of **D1** the technical **problem to be solved** by claim 1 may be regarded as how to predict future radio environment characteristics based on past characteristics.

The problem to be solved being well known in the art, the skilled person would, in consulting the prior art in the field of wireless communication, wishing to find a solution to overcome the above mentioned problem, come across document **D2** which describes a system of wireless stations wherein an archive contains measurement data corresponding to location of wireless stations and wherein said stored data is used for prediction (see in particular **D2** claims 55 and 57).

For the skilled person, therefore, starting from the subject-matter described in **D1**, and being aware of the principle of the solution disclosed in **D2** (i.e. storing historical data in order to better predict the future), it would be obvious to apply the principle of this solution found in **D2** to the use of medium sensing time histogram measurement reports of **D1**, in order to solve the above stated problem. The skilled person **would** thus arrive, without the exercise of inventive skill, at the system corresponding to the subject-matter of claim 1.

The subject-matter of **claim 1** does thus **not involve an inventive step** (Article 33(1), (3) PCT).

- 4) The above objection regarding claim 1 applies also to independent **claim 13**, which defines an apparatus for performing the method defined in independent claim 1. As a consequence the subject-matter of **claim 13** also **does not involve an inventive step** (Article 33(1), (3) PCT).
- 5) The **dependent claims 2-12 and 14-22** do **not** contain any additional features which, in combination with the features of any claim to which they refer, **involve an**

inventive step (Article 33(1), (3) PCT) for the reason that the subject-matter of said claims **either** is in principle directly derivable from the disclosure of document **D1** (see the whole document), **D2** (see in particular claims 55-57) or from document **D3** (see in particular column 11 lines 37-53), **or** represents minor design details which are based on the normal knowledge of a person skilled in the art of mobile telephone networks.

Particularly, the subject-matter of:

- **claims 2, 3 and 17** which relate to generating, receiving or requesting MSTH measurement reports is found in **D1** (section 11.7.7.6);
- **claims 4 and 20** which relate to inter alia defining a MSTH measurement report as comprising count of medium events is found in **D1** (section 11.7.7.6)
- **claims 5, 9 and 21** which relate to inter alia predetermined frequencies and bin indexes is found in **D1** (section 7.3.2.20.5);
- **claims 8, 12, 16 and 22** which relate to management information base is found in **D3** (column 11 lines 37-63);
- **claims 6-7, 10-11, 14-15, 18-19**, which relate to inter alia storing according to FIFO principle, is considered to have no unexpected technical effect, but is a set of mere implementing details falling within the technical competence of the skilled person.

Thus the dependent **claims 2-12 and 14-22** do not fulfil the requirements of Article 33(1), (3) PCT.

Concerning point VII (certain defects)

- 6) If entering the PCT chapter II phase or the regional phase, the applicant should also take the opportunity to attend to the following points regarding defects in form or content.
- a) The independent claims should be drafted in the proper **two-part form** recommended by Rule 6.3(b) PCT, having a preamble that correctly reflects the nearest prior art, presumably that represented by document D1. If the applicant considers two-part form inappropriate in accordance with PCT Guidelines 5.06-5.08, he is invited to provide reasons in his reply and also ensure that it is clear from the description which features defined by the independent claim are known

from the prior art, PCT Guidelines 5.08.

- b) Statements as "**spirit**" or the like on page 6 of the description are unclear and should be deleted according to PCT Guidelines 5.30.
- c) In order to avoid misunderstandings and to increase the readability, the **inappropriate spaces** occurring in the middle of words throughout the text of the claims and description, for example on page 5 line 11 "...rad io...", should be removed.
- d) In order to meet the requirements of Rule 5.1(a)(ii) PCT, the **relevant prior art** document D1 should be acknowledged by reference and briefly discussed in the introductory part of the **description**. Alternatively, if the applicant is aware of a document disclosing the art mentioned in the introductory part of the description, such a document should be explicitly named. a copy of such a document should preferably also be provided for the office.
- e) If any **amended independent claims** are filed e.g. in the PCT chapter II phase, the opening part of the description, including the summary of the invention, should be brought into agreement with the wording thereof, Rule 5.1(a)(iii) PCT.
- f) Also, the application may **not** be amended in such a way that it contains subject-matter which **extends beyond** the content of the **application as filed**, Article 34(2)(b) PCT.

The applicant is requested to **clearly identify any amendments carried out**, irrespective of whether they concern amendments by addition, replacement or deletion, **and to indicate the passages** of the application as filed on which these amendments are based. If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

- g) Amendments, if any e.g. in the PCT chapter II phase should be filed by way of replacement pages in the manner stipulated by Rule 66.8(a) PCT. Moreover,

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/IB2004/052072

the applicant's attention is drawn to the fact that, as a consequence of Rule 66.8(a) PCT the examiner is not permitted to carry out any amendments under the PCT procedure, however minor these may be.